

PMD Naming Convention

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Other supporters are welcome

Motivation & Goal in preparing presentation

Motivation

- Current names are hard to digest
- Shorter names are better
- Decide soon to eliminate draft changes later
- Need names for
 - PMD layer types
 - Individual PMDs
- Other issues that were brought up about naming

Goals

- Collect different naming schemes and input from people
 - Additional schemes and/or support is welcome
- Avoid names that are confusing with other PMDs (TX)
- Differentiate in an easy way between PMDs on a link

Current Naming Convention

- 100M
 - Dual Fiber: 100BASE-LX
 - BiDi OLT: 100BASE-BX-OLT
 - BiDi ONU: 100BASE-BX-ONU
- 1G
 - Dual Fiber: 1000BASE-EX
 - BiDi OLT: 1000BASE-BX-OLT
 - BiDi ONU: 1000BASE-BX-ONU
- ePON
 - 10KM BiDi OLT: 1000BASE-PX-OLT-A
 - 10KM BiDi ONU: 1000BASE-PX-ONU-A
 - 20KM BiDi OLT: 1000BASE-PX-OLT-B
 - 20KM BiDi ONU: 1000BASE-PX-ONU-B

Explanation of terms

- Some schemes describe direction by U and D for “upstream” and “downstream”
 - Use U and D for PON (direction is forced by the technology) and BiDi (direction is only a name)
- Some schemes describe two ends by H and T for “head” and “tail”.
 - There are alternatives e.g.:
 - top and bottom,
 - central office and CPE,
 - root and leaf
 - “OLT” and “ONU” are over-long abbreviations for phrases which do not tell the reader which end is which
- 1 set of schemes removes the word BASE from the naming

Explanation of terms (continued)

- For two PON types A and B, 1 scheme concatenate “PX” with A or B as often used together
- Some schemes move away from “1000BASE-EX” PMD since it isn't extra long wavelength, or long reach by today's standards, it is really an upgrading of the long wavelength 1000BASE-LX.
 - We should keep "1000BASE-EX" for any future 1550 nm gigabit Ethernet PMD standardization
 - Propose "1000BASE-MX" because M is next after L

Other issues to consider

- Do we need a port type to be defined
- Do we need “BASE” in the naming

Alternate Naming Convention 1

PMD layer type	PMD
• 100M	
Dual Fiber: 100BASE-LX	100BASE-LX
BiDi: 100BASE-BX	100BASE-BDX
BiDi: 100BASE-BX	100BASE-BUX
• 1G	
Dual Fiber: 1000BASE-EX	1000BASE-EX
BiDi: 1000BASE-BX	1000BASE-BDX
BiDi: 1000BASE-BX	1000BASE-BUX
• ePON	
10km: 1000BASE-PXA	1000BASE-PDX-A
10km: 1000BASE-PXA	1000BASE-PUX-A
20km: 1000BASE-PXB	1000BASE-PDX-B
20km : 1000BASE-PXB	1000BASE-PUX-B

Alternate Naming Convention 2

PMD layer type	PMD
• 100M	
Dual Fiber: 100BASE-LX	100BASE-LX
BiDi: 100BASE-BX	100BASE-BX-D
BiDi: 100BASE-BX	100BASE-BX-U
• 1G	
Dual Fiber: 1000BASE-EX	1000BASE-EX
BiDi: 1000BASE-BX	1000BASE-BX-D
BiDi: 1000BASE-BX	1000BASE-BX-U
• ePON	
10km: 1000BASE-PXA	1000BASE-PXA-D
10km: 1000BASE-PXA	1000BASE-PXA-U
20km: 1000BASE-PXB	1000BASE-PXB-D
20km : 1000BASE-PXB	1000BASE-PXB-U

Alternate Naming Convention 3

PMD layer type	PMD
• 100M	
Dual Fiber: 100BASE-LX	100BASE-LX
BiDi: 100BASE-BX	100BASE-BX-D
BiDi: 100BASE-BX	100BASE-BX-U
• 1G	
Dual Fiber: 1000BASE-MX	1000BASE-MX
BiDi: 1000BASE-BX	1000BASE-BX-D
BiDi: 1000BASE-BX	1000BASE-BX-U
• ePON	
10km: 1000BASE-PXA	1000BASE-PXA-D
10km: 1000BASE-PXA	1000BASE-PXA-U
20km: 1000BASE-PXB	1000BASE-PXB-D
20km : 1000BASE-PXB	1000BASE-PXB-U

Alternate Naming Convention 4

PMD layer type	PMD
• 100M	
Dual Fiber: 100BASE-LX	100BASE-LX
BiDi: 100BASE-BX	100BASE-BX-H
BiDi: 100BASE-BX	100BASE-BX-T
• 1G	
Dual Fiber: 1000BASE-MX	1000BASE-MX
BiDi: 1000BASE-BX	1000BASE-BX-H
BiDi: 1000BASE-BX	1000BASE-BX-T
• ePON	
10km: 1000BASE-PXA	1000BASE-PXA-H
10km: 1000BASE-PXA	1000BASE-PXA-T
20km: 1000BASE-PXB	1000BASE-PXB-H
20km : 1000BASE-PXB	1000BASE-PXB-T

Alternate Naming Convention 5

PMD layer type	PMD
• 100M	
Dual Fiber: 100BASE-LX	100BASE-LX
BiDi: 100BASE-BX	100BASE-BXD
BiDi: 100BASE-BX	100BASE-BXU
• 1G	
Dual Fiber: 1000BASE-EX	1000BASE-EX
BiDi: 1000BASE-BX	1000BASE-BXD
BiDi: 1000BASE-BX	1000BASE-BXU
• ePON	
10km: 1000BASE-PX-A	1000BASE-PXD-A
10km: 1000BASE-PX-A	1000BASE-PXU-A
20km: 1000BASE-PX-B	1000BASE-PXD-B
20km : 1000BASE-PX-B	1000BASE-PXU-B

Alternate Naming Convention 6

PMD layer type	PMD
• 100M	
Dual Fiber: 100BASE-LX	100BASE-LX
BiDi: 100BASE-BX	100BASE-BXD
BiDi: 100BASE-BX	100BASE-BXU
• 1G	
Dual Fiber: 1000BASE-EX	1000BASE-EX
BiDi: 1000BASE-BX	1000BASE-BXD
BiDi: 1000BASE-BX	1000BASE-BXU
• ePON	
10km: 1000BASE-PXA	1000BASE-PXDA
10km: 1000BASE-PXA	1000BASE-PXUA
20km: 1000BASE-PXB	1000BASE-PXDB
20km : 1000BASE-PXB	1000BASE-PXUB

Alternate Naming Convention 7

PMD layer type	PMD
• 100M	
Dual Fiber: 100-LX	100-LX
BiDi: 100-BX	100-BX-D
BiDi: 100-BX	100-BX-U
• 1G	
Dual Fiber: 1000-MX	1000-MX
BiDi: 1000-BX	1000-BX-D
BiDi: 1000-BX	1000-BX-U
• ePON	
10km: 1000-PXA	1000-PXA-D
10km: 1000-PXA	1000-PXA-U
20km: 1000-PXB	1000-PXB-D
20km : 1000-PXB	1000-PXB-U

Alternate Naming Convention 8

PMD layer type	PMD
• 100M	
Dual Fiber: 100-LX	100-LX
BiDi: 100-BX	100-BX-H
BiDi: 100-BX	100-BX-T
• 1G	
Dual Fiber: 1000-MX	1000-MX
BiDi: 1000-BX	1000-BX-H
BiDi: 1000-BX	1000-BX-T
• ePON	
10km: 1000-PXA	1000-PXA-H
10km: 1000-PXA	1000-PXA-T
20km: 1000-PXB	1000-PXB-H
20km : 1000-PXB	1000-PXB-T

Alternate Naming from STF

PMD layer type

PMD

- 100M

Dual Fiber: 100BASE-LX 100BASE-LX

BiDi: 100BASE-BX 100BASE-BX-L

BiDi: 100BASE-BX 100BASE-BX-E

- 1G

Dual Fiber: 1000BASE-LX-10 1000BASE-LX-10

BiDi: 1000BASE-BX 1000BASE-BX-L

BiDi: 1000BASE-BX 1000BASE-BX-E

- ePON

10km: 1000BASE-PX-10 1000BASE-PX-10-L

10km: 1000BASE-PX-10 1000BASE-PX-10-E

20km: 1000BASE-PX-20 1000BASE-PX-20-L

20km : 1000BASE-PX-20 1000BASE-PX-20-E

Motion #2

- Adopt the naming scheme “Alternate Naming from STF” as the optical PMD naming scheme for EFM
- Moved: Jonathan Thatcher
- Second: Jerry Radcliff
- For:8 Against:6 Abstain:6
- Motion Fails

Optics STF Feedback

- Criteria for naming
 - Distinct names for each PMD type
 - An easily abbreviated name for related PMDs that indicates distance and coding
 - Common naming scheme across PMDs in EFM
 - Indications in the name
 - Coding scheme
 - Distance rather than letter
 - Distinct wavelength

Straw Poll

– For: 16

Against: 0

Abstain: 4

AH Straw Polls: on Optical PMD Naming

- How many people prefer to distinguish both ends of the link
 - Prefer using the convention OLT and ONU and reflecting that in the names – 8
 - Upstream / downstream – 16
 - Head/Tail – 7
 - Network/subscriber – (not many)
 - Provider/subscriber – 1
 - L/E wavelength – 15
 - LT/NT – 13
- Keep BASE in the name – 41
- Keep X in the name – 32
- Numeric length indication – 32